LG

WASHING MACHINE
SERVICE MANUAL

CAUTION

READ THIS MANUAL CAREFULLY TO DIAGNOSE TROUBLES
CORRECTLY BEFORE OFFERING SERVICE.

MODEL : WD-1412RD
WD-14120(5)RD
WD-12120(5)RD
WD-10120(5)RD

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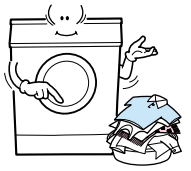
1. SPECIFICATION

ITEM		WD-1412RD / WD-14120(5)RD / WD-12120(5)RD / WD-10120(5)RD	
P0WER SUPPLY		220V-240V~, 50HZ	
PRODUCT WEIGHT		71kg	
ELECTRICITY CONSUMPTION	WASHING	140W	
	SPIN	300W	
	FAN MOTOR	25W	
	DRAIN MOTOR	40W	
	WASH HEATER	2000W	
	DRY HEATER	2100W	
REVOLUTION SPEED	WASH	45rpm	
	SPIN	WD-1412RD/14120(5)R	400/800/1000/1400 rpm
		WD-12120(5)RD	400/800/1000/1200 rpm
		WD-10120(5)RD	400/600/800/1000 rpm
OPERATION WATER PRESSURE		0.3-10kgf/cm^2 (30-1000kPa)	
CONTROL TYPE		Electronic	
WASH CAPACITY		7.0kg (Cotton)	
DRY CAPACITY		4.0kg (Cotton)	
DIMENSION		600mm(W)×600mm(D)×850mm(H)	
WASH PROGRAM		Cotton, Cotton-Eco, Synthetic, Delicate, Wool, Hand Wash, Quick 30	
RINSE		Normal / Super / Rinse Hold	
DOOR SWITCH TYPE		Manual	
WATER LEVEL		8 steps (by sensor)	
RESERVATION		From 3 hours to 19 hours	
SENSING OF THE LAUNDRY AMOUNT		Adapted	
FUZZY LOGIC		Adapted	
DISPLAY OF THE REMAINING TIME		Adapted	
ERROR DIAGNOSIS		10 items	
POWER AUTO OFF		Adapted	
CHILD LOCK		Adapted	
AUTO RESTART		Adapted	
TIME SAVE		Adapted	

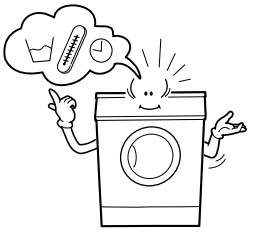
2. FEATURES & TECHNICAL EXPLANATION

2-1.FEATURES



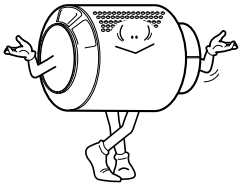
■ Automatic process from washing to drying.

Automatic process from washing to drying can be selected easily.
Washing capacity : 7 kg (Cotton)
Drying capacity : 4 kg (Cotton)



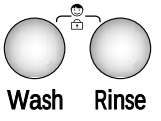
■ More economical by Intelligent Wash System

Intelligent Wash System detects the amount of load and water temperature, and then determines the optimum water level and washing time to minimize energy and water consumption.



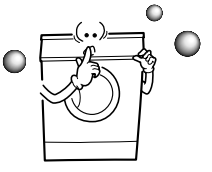
■ Direct Drive system

The advanced Brushless DC motor rotates the Drum directly without belt and pulley.



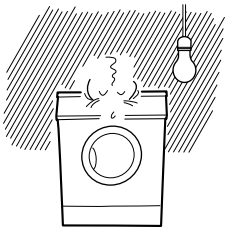
■ Child-Lock

The Child-Lock system has been developed to prevent children from pressing any button to change the program during operation.



■ Low noise speed control system

By sensing the amount of load and balance, evenly distributes load to minimize the spinning noise level.

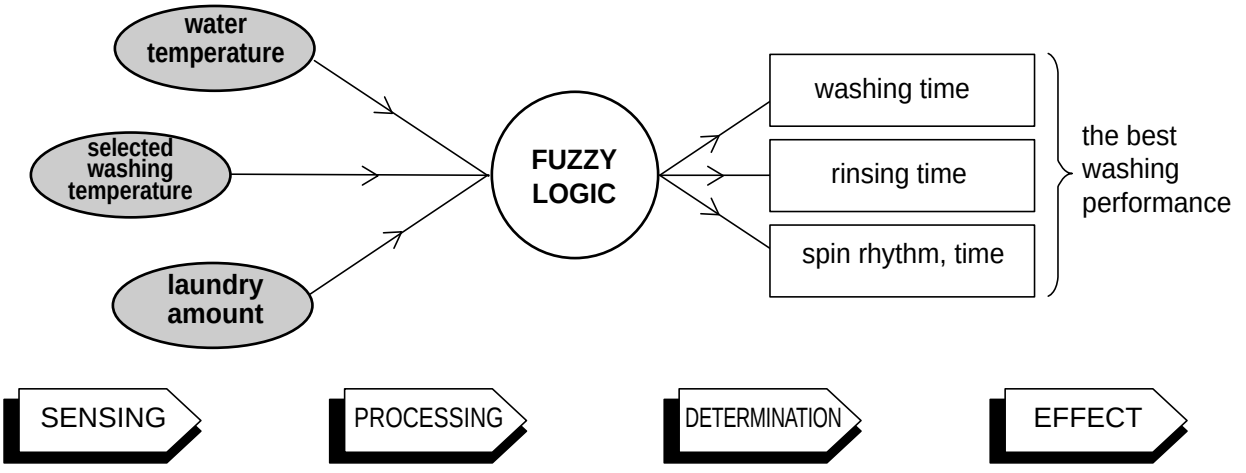


■ Auto Restart

Although the washing machine is turned off by a power failure, it restarts automatically in its stopped process when power is supplied again. And it will be the same when the machine unplugged in operation is plugged in again.

2-2.DETERMINE WASHING TIME BY FUZZY LOGIC

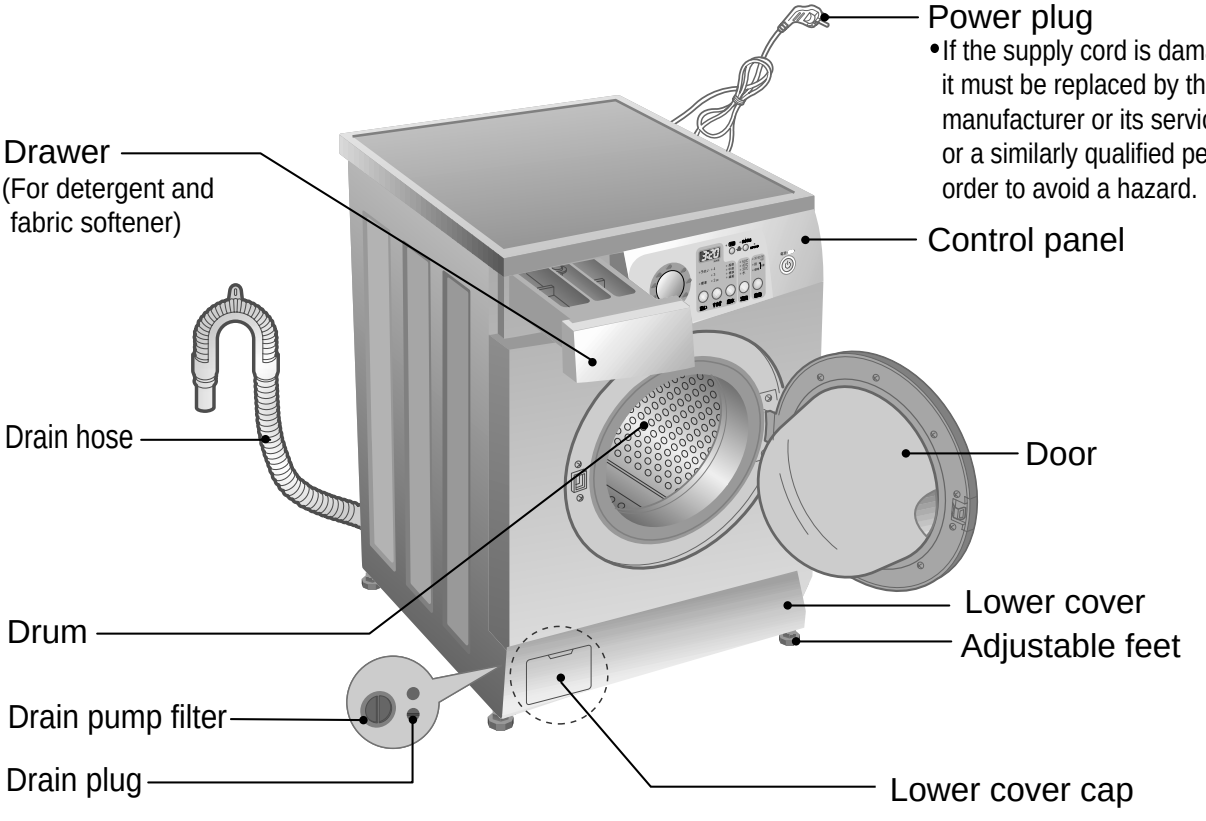
To get the best washing performance optimal time is determined by sensing of water temperature, selected washing temperature and laundry amount.



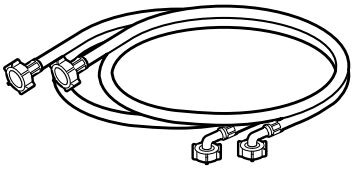
2-3.WATER LEVEL CONTROL

- This model adopts a pressure sensor which can sense the water level in the tub.
- Water supply is stopped when the water level to the preset level, then washing program proceeds.
- Spinning does not proceed until the water in the tub reduces to a certain level.

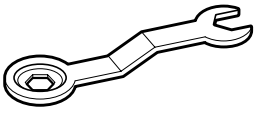
3. PARTS IDENTIFICATION


Power plug
•If the supply cord is damaged, it must be replaced by the manufacturer or its service agents or a similarly qualified person in order to avoid a hazard.
Drawer
(For detergent and fabric softener)
Control panel
Drain hose
Door
Drum
Lower cover
Adjustable feet
Drain pump filter
Drain plug
Lower cover cap

■ACCESSORIES



Inlet hose(1EA) ※Option 2EA



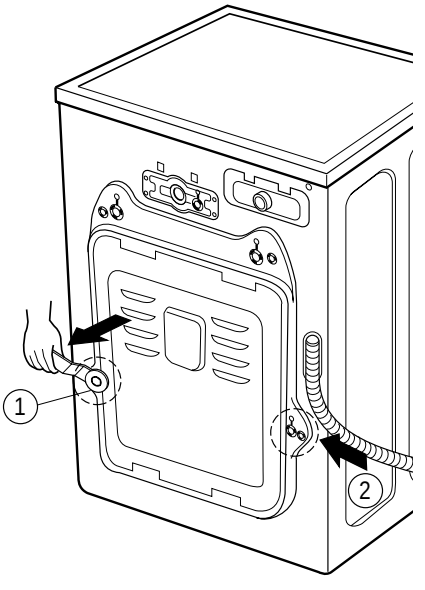
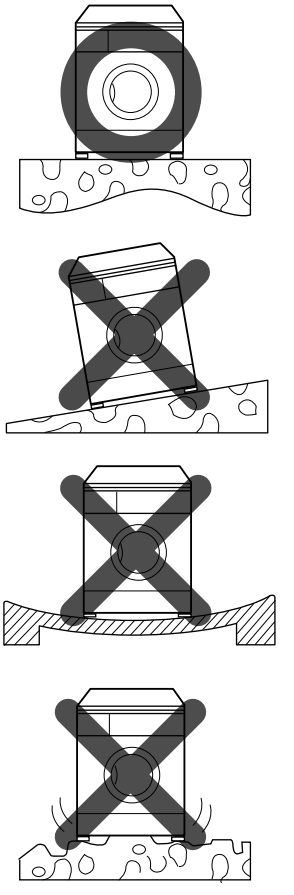
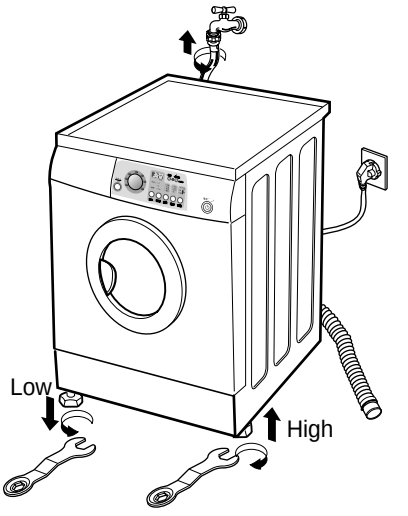
Spanner

4. INSTALLATION

1 Before servicing ask troubles of customers
2 Check the adjustment(power supply is 220-240V~, remove the transit bolts....)
3 Check the troubles referring to the trouble shooting.
4 Decide service steps referring to disassembly instructions.
5 And then, service and repair.
6 After servicing, operate the appliance whether it works O·K or NOT.

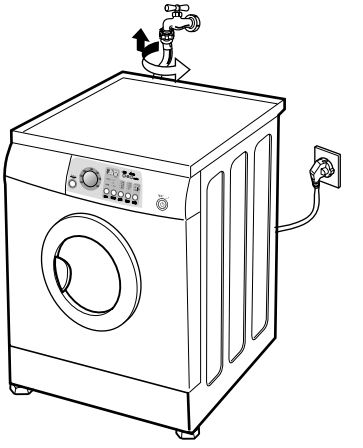
■ STANDARD INSTALLATION

The appliance should be installed as follows.

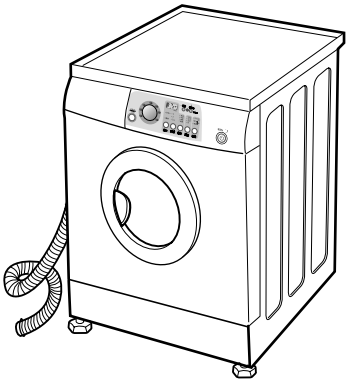
REMOVE THE TRANSIT BOLTS	INSTALL THE APPLIANCE ON FLAT AND FIRM SURFACE	ADJUST THE HORIZONTAL
• Remove the transit bolts (3EA: ①)with supplied spanner. • Keep the transit bolts and spanner for future use. • Insert the 3 caps provided into the hole 		• Turn the leveling feet to set the appliance horizontally.  • The appliance goes up by rotating the feet clockwise. • The appliance come down by rotating the feet counter clockwise.

■ HOW TO CONNECT INLET HOSE

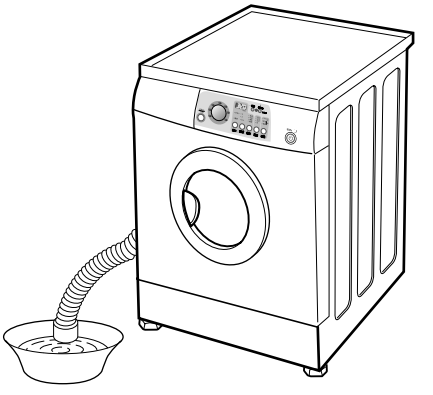
- Check that the rubber packing is inside of the valve connector.
- Connect the inlet hose firmly to prevent leak.



■ CONNECT DRAIN HOSE



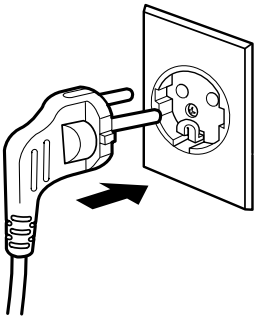
· Make sure that the hose is not twisted.



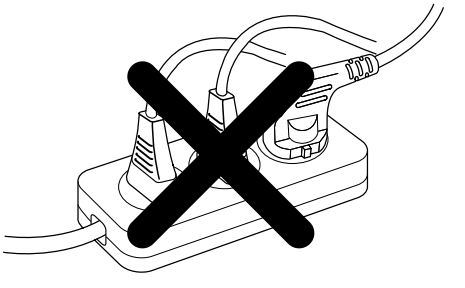
· Avoid submerging the end of the hose.

※ The drain hose should be placed under 100cm from the floor.

■ CONNECT POWER PLUG



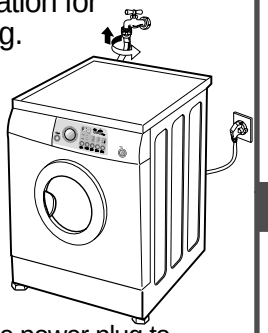
· Connect the power plug to the wall outlet.



· Avoid connecting several electric devices,
It may be the cause of the fire.

7 TEST OPERATION

1 Preparation for washing.

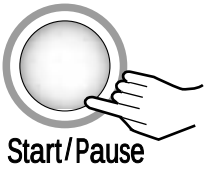


- Connect the power plug to the outlet.
- Connect the inlet hose.

2 Press the POWER button.

Power

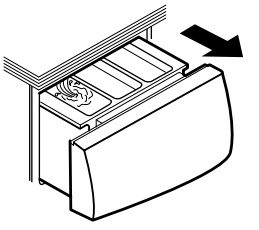
3 Press the Start/Pause button.



Start/Pause

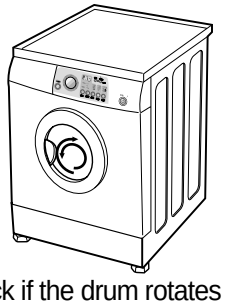
- In case of Coloreds program.

4 Check the water supply.



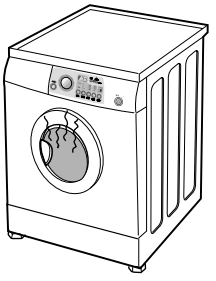
· Check if water is supplied through the detergent dispenser.

5 Check automatic reverse turn.



· Check if the drum rotates clockwise and counterclockwise.

6 Check the water heating.

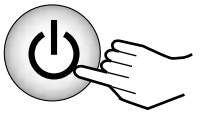


· Press the Temp. button and the present temperature will be displayed.

7 Check drain and spin

· Turn off Wash and Rinse after pressing the Start/Pause button and start the machine again.
· Check drain and spin.

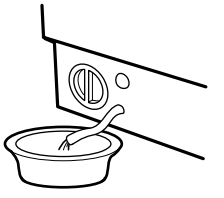
8 Power off and open the door



Power

· Power off and then power on.
· Check if the door can be opened after 3 minutes.

9 Water removal



· If SVC is needed during check, remove the remaining water by pulling out the hose cap.

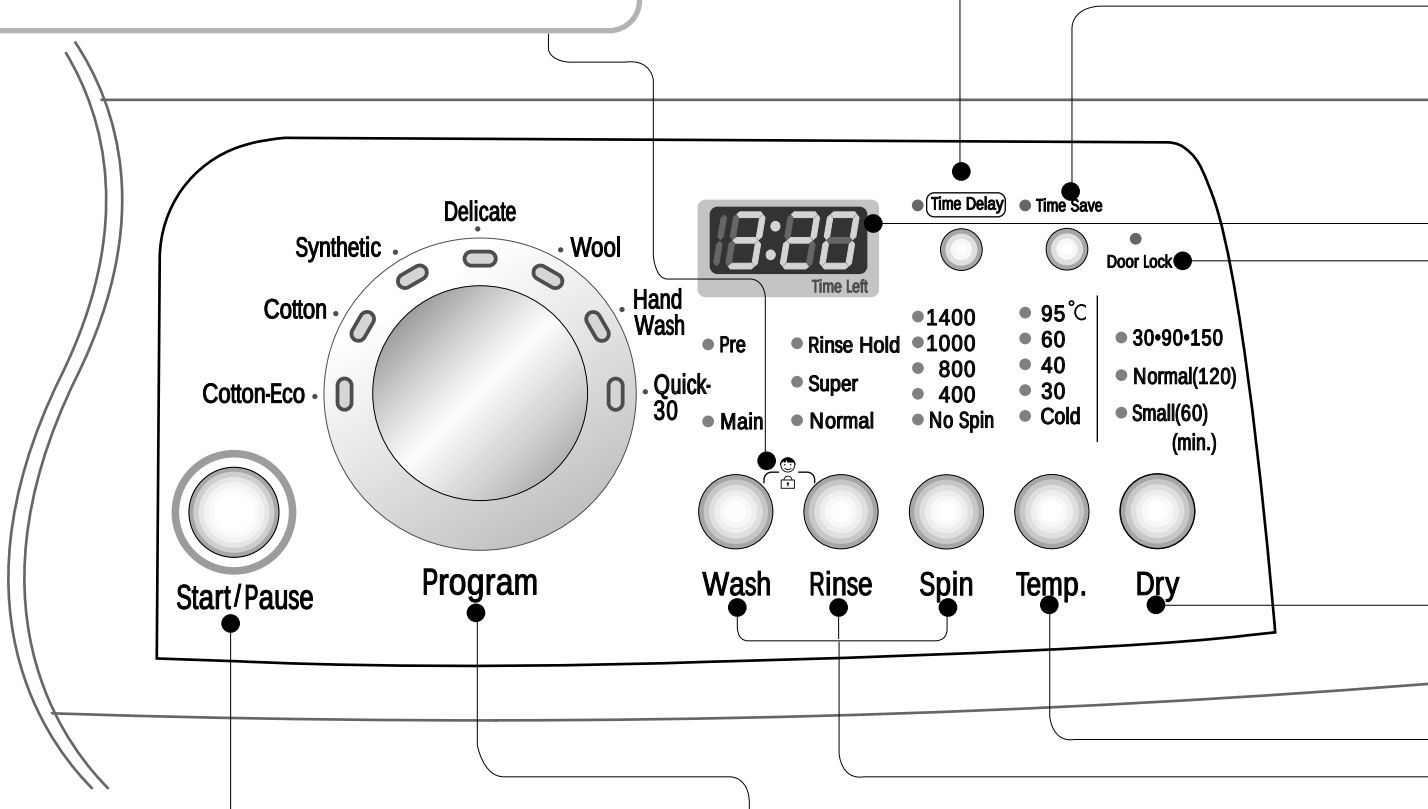
5. OPERATION

Child lock

- Once Child-Lock is set, and canceled by pressing both [Water Temp.] and [Time Delay] simutaneusly once Child lock is set. Once Chold Lock is set, all buttons are iroperable.
- The Child-Lock system can be set at any time even including during Power-Off, on Pause and operation. It is automatically cancelled when an operational error occurs and when the cycle ends.
- When power is off, the LED indicates [CL] only. During operation, or when the programme is paused the LED will indicate [CL] and the remaining time.

Delay finish

- Press the button when reservation washing is needed.
- When the button is pressed, [3:00] is displayed.
  A maximum delay of [19:00] hours can be set.
- Each press advances time delay by one hour.
- Use ON/OFF button to cancel [Time delay].



Start/Pause button

- Use the button to start or pause wash cycle.
- The power turns off automatically in 4 minutes after the pause button is pressed.
- Press the button to change the program.

Wash program selector

- 7 programs can be selected depending on the type of the laundry.
- By turning the dial,
  [Cotton → Cotton-Eco → Synthetic → Delicate → Wool → Hand Wash → Quick 30] can be selected

Time Save

- This option can be used to reduce the time of a wash program.
- This function in not available with Quick 30 program.

LED display

- Display the remaining time (Hour : Minute) to finish.
- In case of abnormal operation, error indications are displayed. (PE, FE, dE, LE, bE, CE, UE, dHE, tE, OE)
- See trouble shooting guide.
- When drying cycle is completed, Cd [COOL DOWN] is displayed on the Multi display.
- The COOL DOWN is setting automatically when a drying cycle is complete.
- When you are not remove a load of clothes from the dryer as soon as it stops, wrinkles can form.
- The COOL DOWN operating periodically tumbles, rearranges and fluffs the load to avoid wrinkles without heat for up to 4 hours.
- The Cd message will continue to display until the clothes are removed or the START/PAUSE button is pressed.

Door lock display

- It shows whether the door can be opened or not during the washing.
- If the lamp is off, the door can be opened .

Power

ON/OFF button

- Press the button to turn power on and off.

Dry selector

- Dry programs can be selected by pressing the [Dry] button.
- By pressing the button, [Small → Normal → Time (30•90•150)] can be selected.

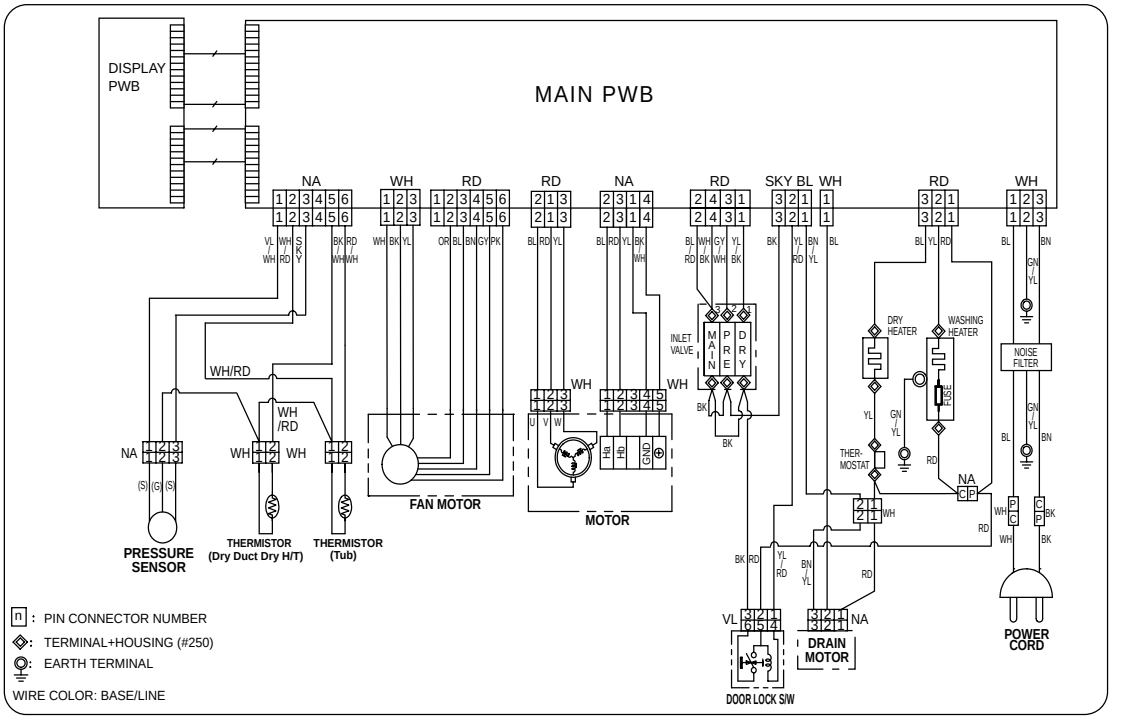
For manual wash, rinse and spin

- Use these buttons to change washing method, rinse times, spinning speed.
- When lamp is off, no selection has been made.
- Prewashing is available for Cotton, Cotton-Eco, Synthetic program.

Water temperature selector

- Press the button to select water temperature.
- The water temperature is selected [60°C → 95°C → Cold →30°C →40°C] during cotton program.
- 95°C is selected only for cotton program.
- By pressing the button during operating the washer, the present temperature is displayed.

6. WIRING DIAGRAM / PROGRAM CHART



PROGRAM CHART

* Water Supply : W·S * Intermittent Spin : I·S * Disentangle : D·T

COURSE / CYCLE STEP	Wash: Pre W·S	Wash: Pre Washing	Wash: Pre Drain	Wash: Pre I·S	Wash: Main W·S	Wash: Main Washing Heat	Wash: Main Washing Wash	Wash: Main Staycooling W·S	Wash: Main Staycooling Rinse	Wash: Main Staycooling Drain	Rinse: Normal (Hold) 1 Drain	1 I·S	1 W·S	1 Rinse	2 Drain	2 I·S	2 W·S	2 Rinse	3 Drain	3 I·S	3 W·S	3 Rinse	Rinse: Extra (Hold) 4 Drain	4 I·S	4 W·S	4 Rinse	Spin Drain	Spin Spin	Spin D·T	DRY	END	AUTOOFF	Normal Working Time (Hour:Minute)
Step	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		20	20	
Time (SEC)	120	MIN	60	300	120		MIN	120	60	60	60	300	120	360	60	300	120	360	60	300	120	360	60	300	120	360	60	600	120		20	20	
Cotton		8					60 / 96																										About 2:41(2:39)
Cotton-Eco		8					1 / 40																										About 3:01
Synthetic		8					23 / 59																										About 1:30
Quick 30							12																										About 30
Delicate							1 / 29																										About 1:01
Wool							1 / 23																										About 1:01
HandWash							1 / 29																										About 1:00
Wash		8					60 / 96																										About 1:03
Rinse																																	About 39
Rinse Hold																																	About 39
Dry																																	About 3:40
Spin																																	About 12
Wash + Rinse		8					60 / 96																										About 1:48
Wash +Spin		8					60 / 96																										About 1:14
Rinse + Spin																																	About 38

* ■■■■ Basic Cycle
* ····· Optional Cycle

* Pre-Setting Time : Water Supply - 120 sec.
Drain - 60 sec.

* ~ Time for varies as the temperature or the amount of laundry.

* Basic time is minute in washing chart

* The actual program time can be varied with the load amount, water temperature or ambient temperature

7. TROUBLE SHOOTING

7-1.BEFORE SVC CHECKING

■ Be careful of electric shock or disconnecting the parts while trouble shooting.

■ Voltage of each terminal in 220-240V~ and DC while applying an electric current.

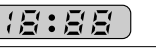
7-2.QC TEST MODE.

① Pressing Rinse, and Spin button simultaneously.

② Power supply ON with pressing upper two button.Then buzzer sound twice.

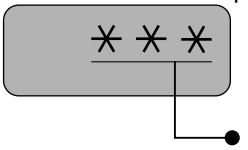
③ Press the Start/Pause button as follows.

[Press the Start/Pause button more 4 times until stop spinning]

Pressing number of [Start/Pause] button	Checking Point	Display Status
None	All lamps turn on	
1 time	Clockwise spin(right)	Drum rpm(About 40~52)
2 times	Low speed Spin	Drum rpm(About 70~90)
3 times	High speed Spin	Drum rpm(About 90~110)
4 times	Inlet valve for pre-wash operation	Water level frequency(25~65)
5 times	Inlet valve for main-wash operation	Water level frequency(25~65)
6 times	Inlet valve for dry operation	Water level frequency(25~65)
7 times	Counterclockwise spin(left)	Drum rpm(About 40~52)
8 times	Heater is in operation for 3 sec.	Water temperature
9 times	Draining pump operation	Water level frequency
10 times	Dry operation for 6 minutes	Auto off operation after 6 minutes

7-3.HOW TO KNOW THE WATER LEVEL FREQUENCY

* Press the Rinse and Spin button simultaneously.



The digits means water level frequency(10^{-1} kHz)

ex) 241 : Water level frequency = 241×10^{-1} kHz

=24.1 kHz

7-4.HOW TO KNOW TO TEMPERATURE OF EACH THERMISTOR AT OPERATING CONDITION.

■ Thermistor in tub : Press the [WATER TEMP] button.

■ Thermistor in dry duct : Press the [DRY] button.

■ Thermistor in condensing duct : Press the [SPIN] and [DRY] button simultaneously.

7-5.ERROR DISPLAY.

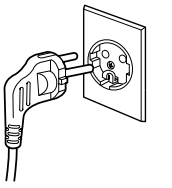
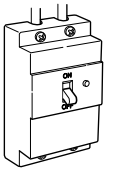
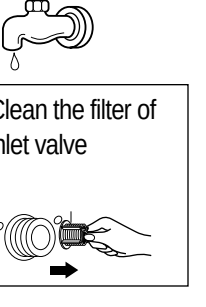
- If you press the Start/Pause button in error condition, any error except 'PE' will disappear and the machine will change into pause status.
- In case of 『PE』, 『tE』, 『dHE』, if the error is not resolved within 20 sec., and in case of other errors, if the error is not resolved within 4 min., power will be turned off automatically and the error only will be blinked. But in case of 『FE』, power will not be turned off.

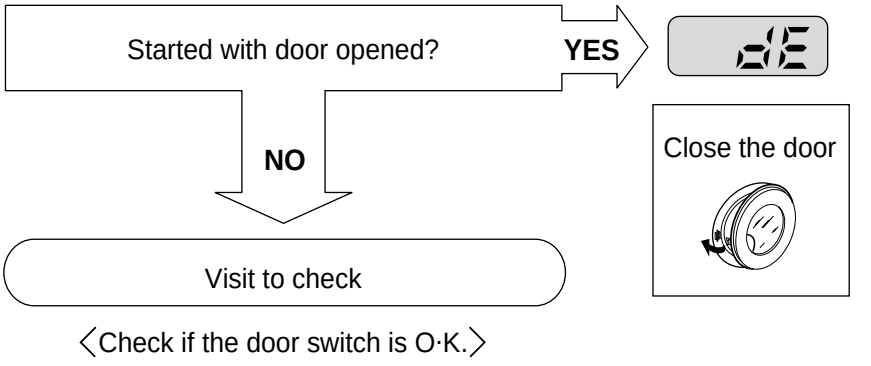
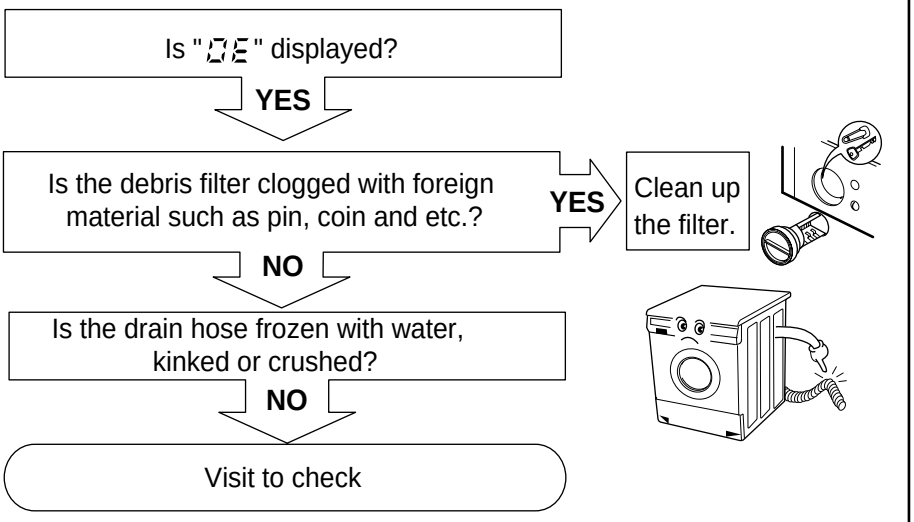
	ERROR	SYMPTOM	CAUSE
1	WATER INLET ERROR		• Not reached to the water level(2 level)within 4 minutes after water supplied or not reached to the preset water level within 25 minutes.
2	DRAIN ERROR		• Not fully drained within 5 minutes.
3	OVERFLOW ERROR		• Water is over flowing(over 8 level). ¡ If is displayed, drain pump operates to drain water automatically.
4	SENSOR PRESSURE S/W ERROR		• The sensor pressure switch is out of order.
5	DOOR OPEN ERROR		• In case of operating the reservation function or the other function with door opened. Close the door, then the error display is resolved. • The door switch is out of order.
6	IMBALANCE ERROR		• The appliance is tilted. • Laundry is gatherd to one side.
7	HEATING ERROR		• The THERMISTOR is out of order.

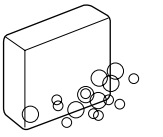
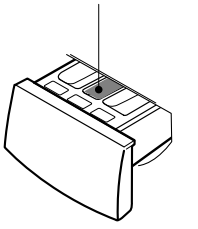
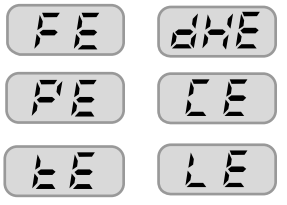
	ERROR	SYMPTOM	CAUSE
8	CURRENT ERROR		• MAIN PWB ASSEMBLY is out of order ☞Replace the MAIN PWB ASSEMBLY • Winding in the STATOR ASSEMBLY is short-circuited. ☞Replace the STATOR ASSEMBLY • "CE " is dispplayed during a high spin ☞Replace the LEAD WIRE ASSEMBLY (MOTOR)
9	MOTOR ERROR		• The connector in the LEAD WIRE ASSEMBLY is not connected to the connnector of STATOR ASSEMBLY ☞Reconnect or repair the connector • The hall sensor is out of order/defective. ☞Replace the STATOR ASSEMBLY
10	DRY HEATOR ERROR		• The Dry Heater is out of order ☞Replace the Dry Heater • The Connector of the Dry Heater is not connected properly to the connector in the Main PWB ASSEMBLY ☞Reconnect or repair the connector • The Dry fan motor is out of order ☞Replace the fan Motor.

8. ERROR DIAGNOSIS AND CHECK LIST

8-1.DIAGNOSIS AND ANSWER FOR ABNORMAL OPERATION

<table>
<tr><th>SYMPTOM</th><th>GUIDE FOR SERVICE CALL</th></tr>
<tr><td>NO POWER</td><td>Is the power plug connected firmly to 220-240V~ outlet?
YES
Power failure? or Breaker opened?
NO
Visit to check
 
  </td></tr>
<tr><td>Water inlet trouble
 </td><td>Is " 1E " displayed?
YES
Is the tap opened?
YES
Is the tap frozen?
NO
Is the water supply shut-off?
NO
Is filter in the inlet valve clogged with foreign material?
YES
Clean the filter of inlet valve
 
NO
Visit to check</td></tr>
</table>

SYMPTOM	GUIDE FOR SERVICE CALL
• Door does not open • Error displayed on the program 	
• DRAIN TROUBLE 	

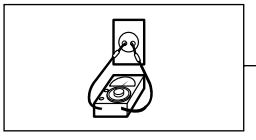
SYMPTOM	GUIDE FOR SERVICE CALL
◦ Suds overflow from the appliance. (In this condition, wash and spin do not operate normally)	Is low-sudsing detergent for the drum washing machine used? **YES** Is the proper amount of detergent used as recommended? **YES** Recommend to reduce the using amount of detergent. ✳ This appliance has the automatic suds sensing function which operates under much suds condition for good rinse and preventing overflow. ✳ When much suds are sensed, suds removing function such as drain, water input and pause will operate without rotating the drum.  LOW-SUDSING
◦ No effect of softener	Is softener put in the correct compartment of the drawer? **YES** Is the drawer closed during wash? **YES** Is the softener cap clogged? **YES** Explain how to use softener **< Clean the compartment for softener >** Compartment for softener 
	Visit to check

8-2.FAULT DIAGNOSIS AND TROUBLE SHOOTING

CAUTION

1. Be careful of electric shock or disconnecting the parts while trouble shooting.
2. First of all, check the connection of each part terminal with wiring diagram.
3. If you replace the MAIN PWB ASSEMBLY, Put in the connectors correctly.

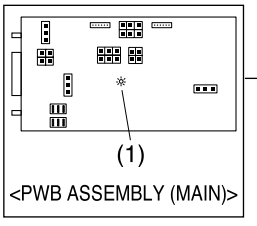
NO POWER



When measuring the voltage of the outlet, is the voltage AC 220-240V~?

NO → Check the fuse?

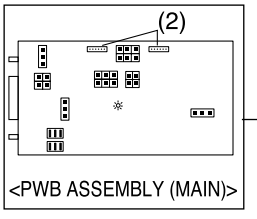
YES ↓



Is the led(1) on?

NO → Replace MAIN PWB ASSEMBLY

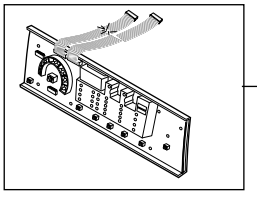
YES ↓



Is connector(2) disconnected or disassembled?

YES → Reconnect the PWB ASSEMBLY

NO ↓



Is wire of the PWB ASSEMBLY disconnected?

YES → Reconnect the PWB ASSEMBLY

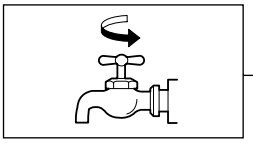
NO ↓

Replace PWB ASSEMBLY

NO WATER SUPPLY

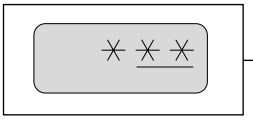
Is water supply shut-off?

NO



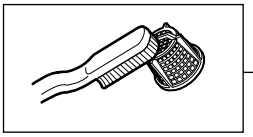
Is the tap opened? — **NO** → Open the tap.

YES



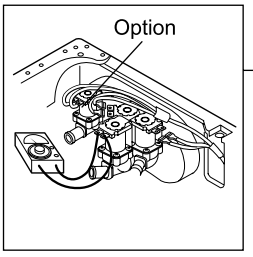
When you press both Rinse button and Spin button simultaneously, is the water level frequency below 240? — **YES** → Check the AIR CHAMBER and the tube clogged with impurity.

NO



Is the inlet valve filter clogged with impurity? — **YES** → Clean the filter.

NO

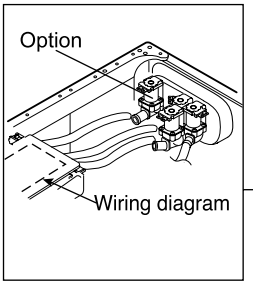


Is resistance between each terminal of INLET VALVE ASSEMBLY is 2~8 kΩ? — **NO** → Replace the INLET VALVE ASSEMBLY.

YES

Check the voltage of the inlet valve connector 220-240V~.
(Refer to 7-2 QC TEST MODE) — **NO** → Replace the MAIN PWB ASSEMBLY

DETERGENT DOES NOT FLOW IN

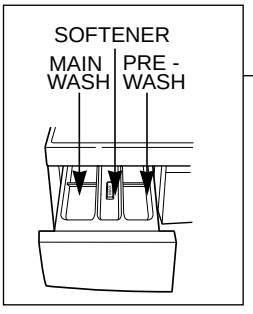


Is water supplied? — **NO** → Refer to 「NO WATER SUPPLY」

YES

Are replaceptacles correctly connected to the terminals of the INLET VALVE ASSEMBLY? — **NO** → Check the wiring on the dispenser.

YES



Is detergent put in the correct compartment of the drawer? — **NO** → Put the detergent in the correct position

PRE+MAIN ● ● ●

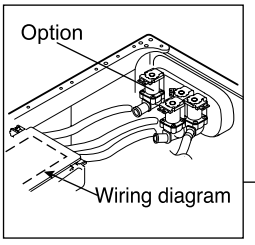
MAIN WASH ● ○ ○

● : Detergent

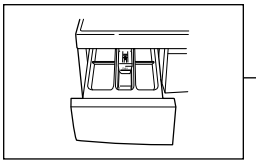
YES

Is the detergent hardened? — **YES** → Clean the drawer.

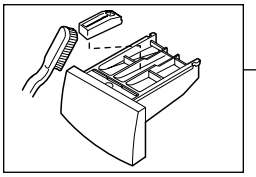
SOFTENER DOES NOT FLOW IN



Is water supplied?
- NO → Refer to 「NO WATER SUPPLY」
- YES ↓



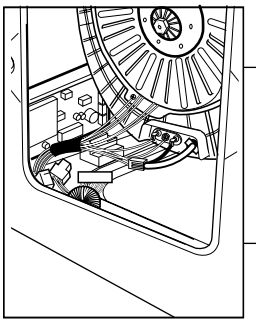
Are receptacles correctly connected to the terminals of the INLET VALVE ASSEMBLY?
- NO → Check the wiring on the dispenser.
- YES ↓



Is softener put in the correct compartment of the drawer?
- NO → Put it in the correct compartment.
- YES ↓

Is the softener cap clogged?
- YES → Clean the cap and drawer.

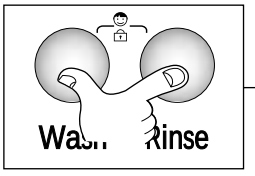
ABNORMAL SOUND



Is the motor bolt loosened?
- YES → Fix the bolt tightly.
- NO ↓

Is there friction noise from the motor?
- YES → Replace the STATOR ASSEMBLY or ROTOR ASSEMBLY.

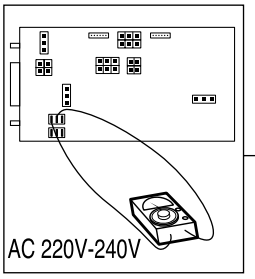
HEATING WITHOUT WATER



When pressing Wash and Rinse at the same time after draining, is the water level frequency 248 ~ 262 or more?
When pressing Rinse, Spin buttons at the same time while wash, is the water level frequency between 230 - 243?

NO → Replace the S.PRESSURE SWITCH ASSEMBLY

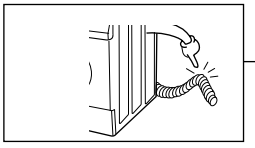
YES



Checking voltage between two pins as press the POWER button is the voltage 220-240V~?

YES → Replace the MAIN PWB ASSEMBLY

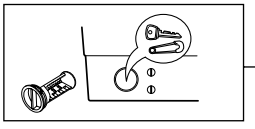
DRAIN MALFUNCTIONING



Is the drain hose twisted or frozen?

YES → Repair the DRAIN HOSE ASSEMBLY.

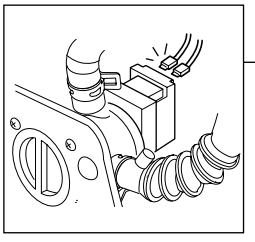
NO



Is the impeller of the drain pump clogged?

YES → Remove foreign material.

NO



Is the connector disconnected, disassembled?

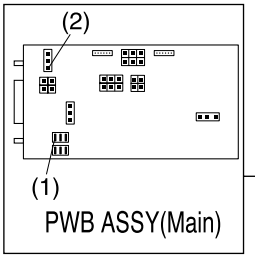
YES → Reconnect or repair the connector

NO

Is the coil of the drain pump cut-off?
(resistance of coil is 80~150Ω)

YES → Repair the DRAIN PUMP ASSEMBLY.

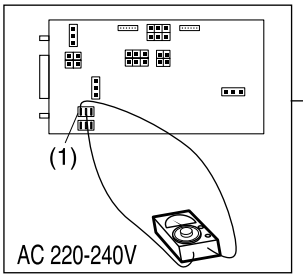
NO



When checking voltage between connectors (①, ②)on spinning, is the voltage 220-240V~ as the figure?

NO → Repair the MAIN PWB ASSEMBLY.

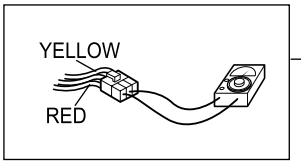
WASH HEATER TROUBLE



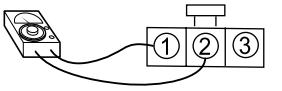
When checking the voltage between connector during whites washing. is the voltage 220-240V~?

NO → Replace the MAIN PWB ASSEMBLY

YES ↓

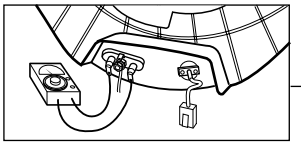


After power off,is the resistance of wire (RED-YELLOW) connectors between 10Ω~30Ω?



YES → Normal

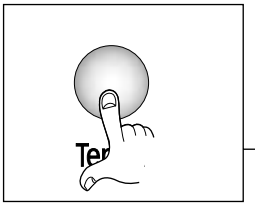
NO ↓



After power off and the heater terminal is disconnected, is the resistance 10~30Ω?

NO → Replace the HEATER ASSEMBLY

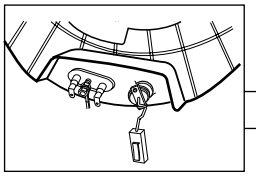
HEATING CONTINUOUSLY ABOVE THE SETTING WATER TEMPERATURE



When pressing Water Temp. during, is the displayed temperature is over 10˚C higher than the selected temp?

NO → Check if inlet hose is connected to a hot faucet ; otherwise, replace PWB ASSEMBLY(Main)

YES ↓



Is the resistance between Thermistor Comectors 2.5kΩ~180kΩ?

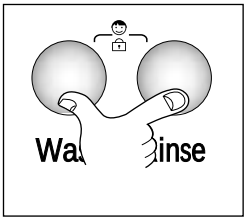
NO → Replace Thermister

YES ↓

When checking THERMISTOR on the tub is the THERMISTOR loosened above 2mm from the rubber?

YES → Push the THERMISTOR tightly to the rubber.

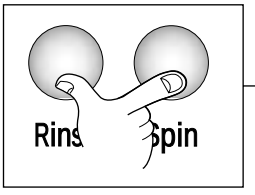
SPIN TROUBLE



Check on the spinning, is the frequency of the water level 248 or more. The frequency can be checked by pressing the Wash and Rinse buttons at the same time on the program.

NO → Check the S.PRESSURE SWITCH ASSEMBLY or HOSE (Pressure). If the problem is on the S.PRESSURE SWITCH ASSEMBLY or the HOSE, replace the S.PRESSURE SWITCH ASSEMBLY or the HOSE.

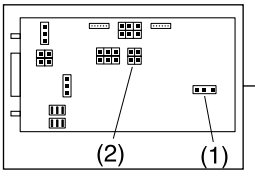
YES



When pressing Rinse, Spin and POWER buttons at the same time after power off, press the Start/Pause button 1 times, is the drum low speed spin?

YES → Normal

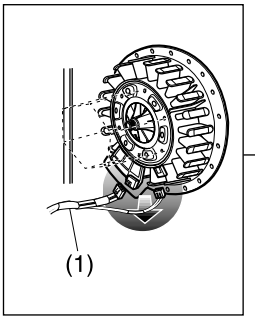
NO



Is it disconnected, or disassembled?
[Red:3pin(1), NA:4pin(2)]

YES → Correct the connector.

NO



Check the motor connector, is the resistance of the terminal same as the figure?

MOTOR TERMINAL (1)

①	②	③

Resistance of terminal:

①~② / ②~③ / ③~① : About 5 Ω~15 Ω

NO → Replace the STATOR ASSEMBLY

YES

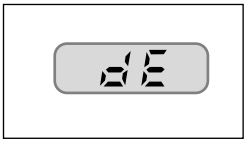
Replace the MAIN PWB ASSEMBLY

DOOR DOES NOT OPEN

Is 「Door lock」 Display lamp on?

YES → After draining and 「Door lock」 lamp off, open the door.

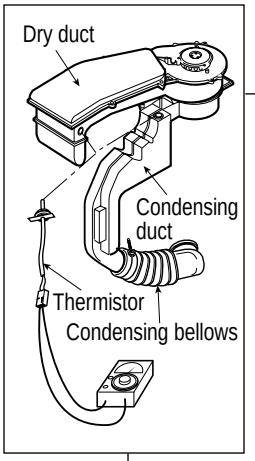
NO



Is 「 dE 」 Displayed?

YES → Check switch Assembly, Door lock connector and Main PWB ASSEMBLY(Blue, 3pin)

[dHE] ERROR DISPLAY



Is the resistance of 2 thermistors on condensing duct and dry duct 2.5k‰ ~ 180k‰ (at 105¡C~ 0¡C)

NO → Replace the thermistor. (6322FR2046B)

YES

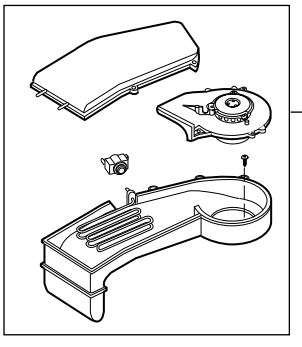
CHECK FOR DRY HEATER TROUBLE

CHECK FOR DRY FAN MOTOR TROUBLE

Disassemble the cabinet cover and condensing bellows.
Is there any foreign object in condensing bellows.

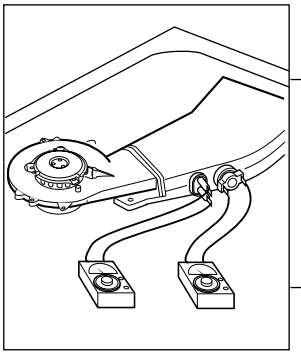
YES → Clean the bellows

NO



Disassemble the dry fan assy and dry duct upper, and clean foreign object in duct and fan.

DRY HEATER TROUBLE



After power off, is the resistance of dry heater 10 ~ 40Ω?

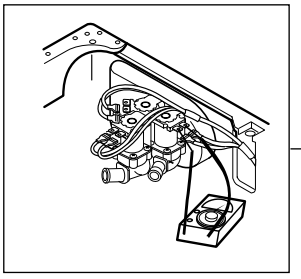
NO → Replace the dry heater.

YES

Is thermostat closed?

NO → Replace the thermostat.

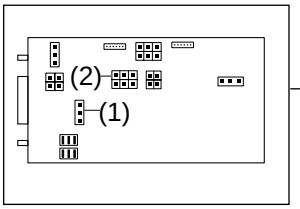
YES



When checking voltage between connectors (① , ②) on drying, is the voltage AC 220-240V as the figure?
(wire color : ① - Red, ② - Blue)

NO → Replace the PWB ASSEMBLY(Main)

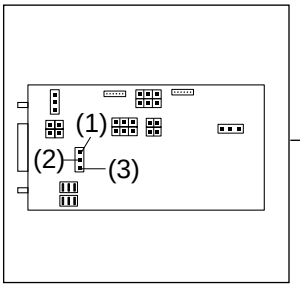
DRY FAN MOTOR TROUBLE



Is it disconnected, or disassembled?
¡ [(1) - Nature , 3pin (2) - Red 6pin ¡ \

YES → Reconnect or repair connector.

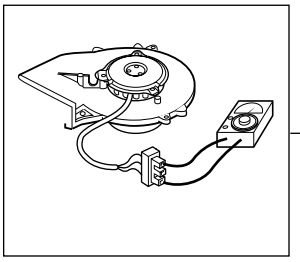
NO



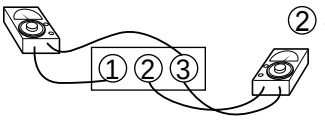
When checking voltage between connectors
¡ [(1)~ (2), (2) ~ (3) ¡ \ on drying, is the voltage DC 9~15V as the figure?
¡ [wire color : (1) - White, (2) - Blue
(3) - Black ¡ \

NO → Replace the PWB ASSEMBLY(Main)

YES

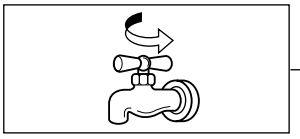


Check the motor connector, is the resistance of terminal same as the figure?
Resistance of terminal : ① - ③ : 2~5Ω
② - ③ : 2~5Ω



NO → Replace the DRY FAN ASSEMBLY.

LOT OF VAPOR IN DRAWER WHEN DRYING

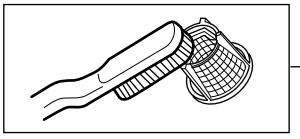


Isn't the water supply shut-off?

NO

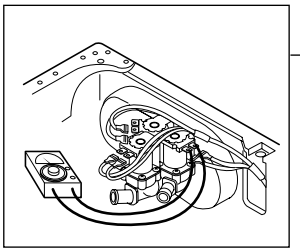
Is tap opened? **NO** → Open the tap.

YES



Isn't the inlet valve filter clogged with impurity? **YES** → Clean the filter.

NO



Is resistance of the inlet valve terminal between 2 to 8 k Ω? **NO** → Replace the inlet valve. (5220FR2075B)

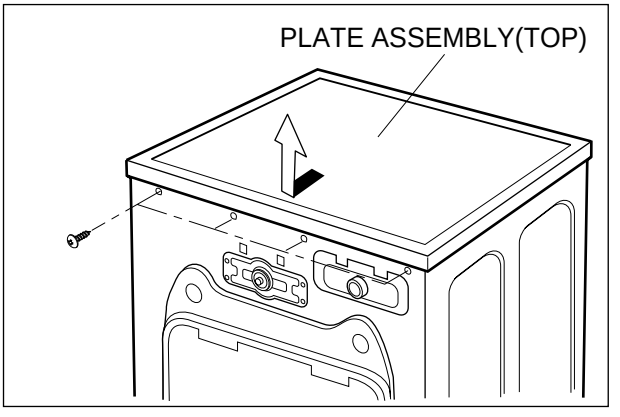
YES

Check if the voltage of each terminal of Inlet Valve is AC 220-240V~. (Refer to 7.TEST MODE) **NO** → Replace PWB ASSEMBLY(Main)

9. DISASSEMBLY INSTRUCTIONS

ƒR Disassemble and repair the parts after pulling out power cord from the outlet.

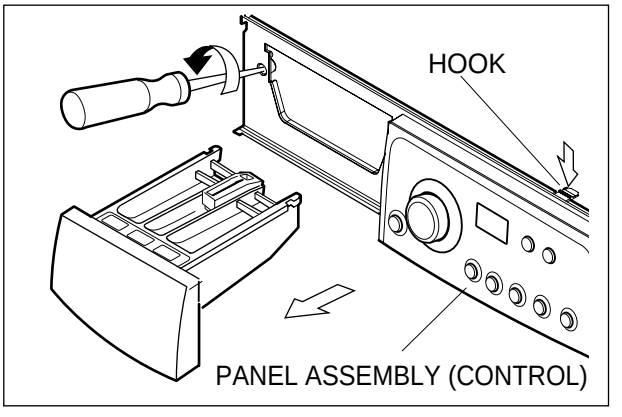
CONTROL PANEL



¤ Unscrew the screws on the top plate.

¤Ł The plate assembly(Top) is pulled back and then upward to arrow direction.

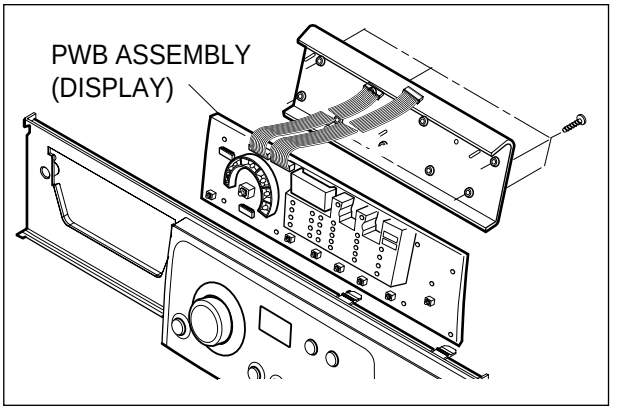
¤Ø The cover(Inner) is disassembled.



¤ The PWB assembly(Display) connectors are disconnected.

¤Ł Pull out drawer, three screws are unscrewed.

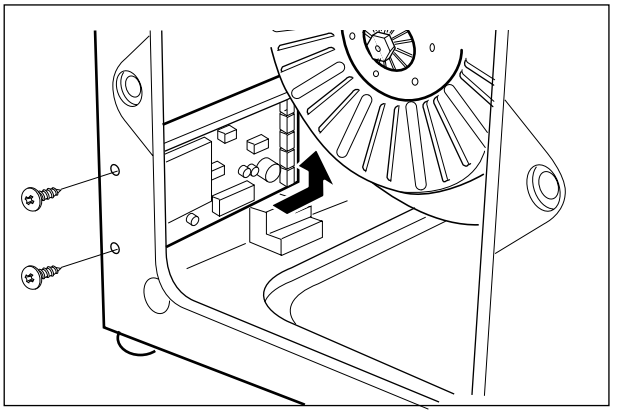
¤Ø Push two upper hooks and pull the control panel forward.



¤ The PWB assembly(Display) is disconnected.

¤Ł When 8 screws are unscrewed on the PWB insulator and the PWB assembly(Display) is disassembled from the PWB insulator.

PWB ASSEMBLY(POWER)



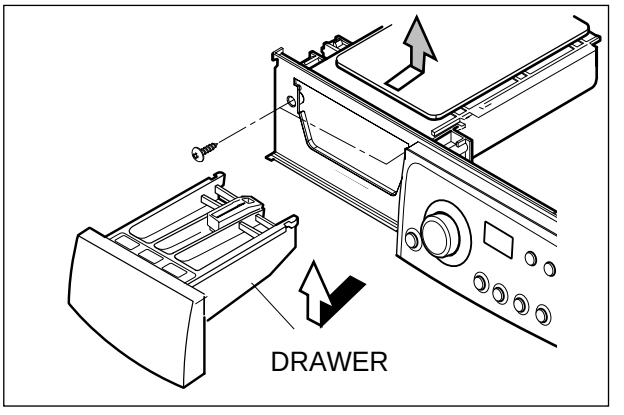
¤ The back cover is removed.

¤Ł Two screws are unscrewed.

¤Ø Disconnect connector from the wiring.

¤Œ Pull the PWB assembly (Main) to arrow direction.

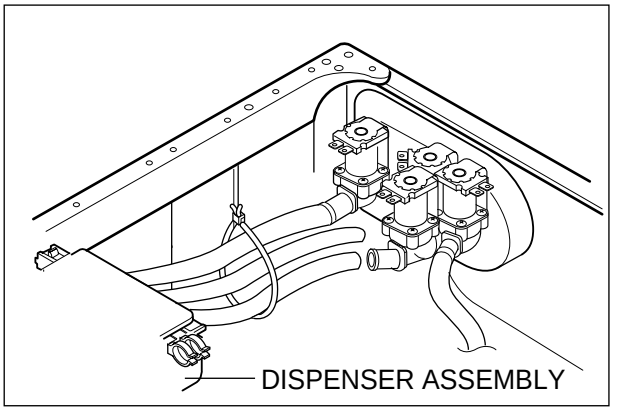
DISPENSER ASSEMBLY



¤ The plate assembly(Top)and the cover(Inner)are disassembled.

¤Ł Pull the drawer to arrow direction.

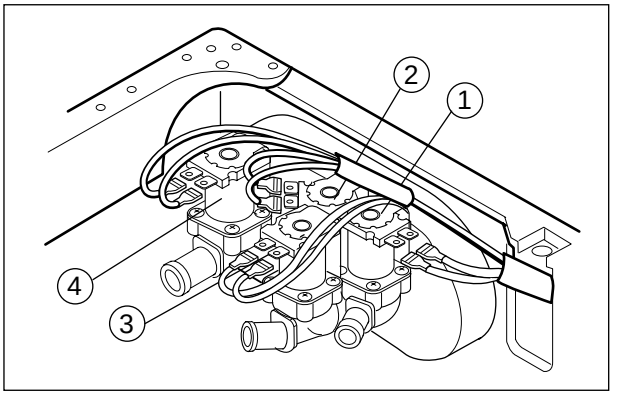
¤Ø Two screws are unscrewed.



¤ The hose clamps and the hose are disassembled.

¤Ł The ventilation bellows are disassembled on the tub.

INLET VALVE



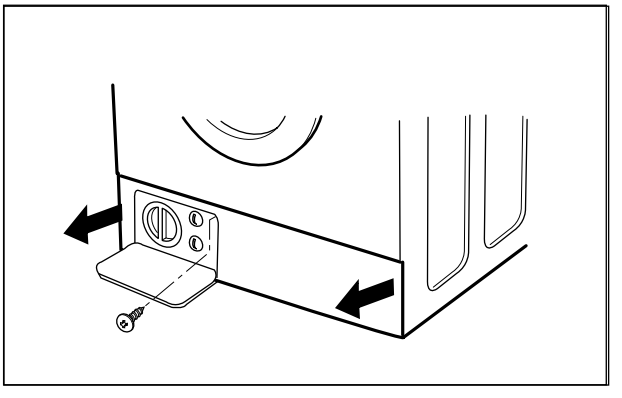
¤ Disconnect the wiring connector.

¤Ł Remove the valve by two screws of the valve holder.

ƒ TWhen reconnecting the connector

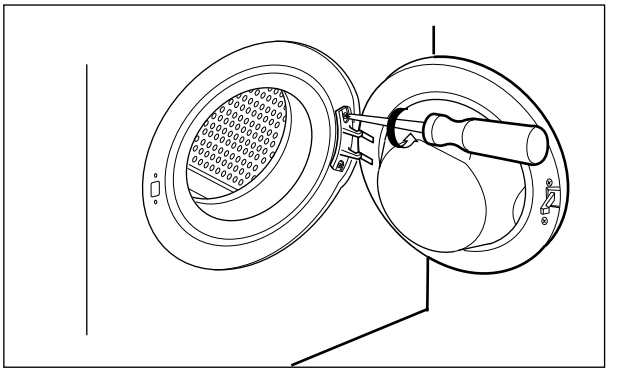
VALVE ¥L (DRY)	YL/BK - BK
VALVE ¥M (PRE-WASH)	GY/WH - BK
VALVE ¥N (NORMAL-WASH)	WH/BK - BK BL/RD - BK
VALVE ¥0 (HOT)	BL/RD - BK

COVER LOWER



¤ Remove the lower cover to arrow direction after one screw is unscrewed.

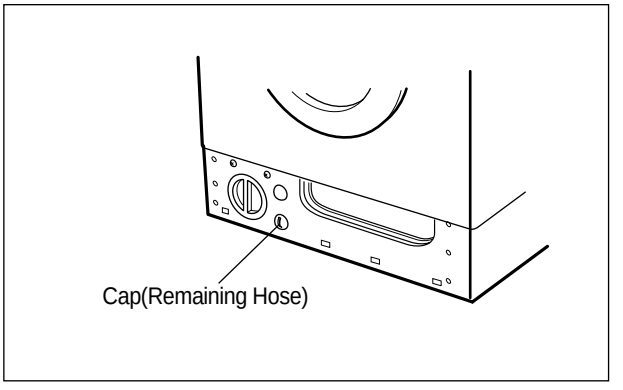
DOOR



¤ Open the door completely.

¤Ł Remove the two screws from the hinge.

¡ When removing the Door Assembly, it is necessary to hold the Bracket that is inner of the Cabinet Cover.



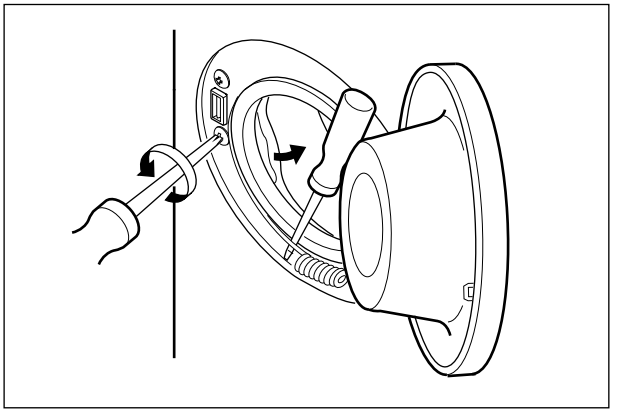
Removing method of remained water

¤ Rotate the Cap(Remaining Hose) to arrow direction.

¤Ł Pull it out from hose.

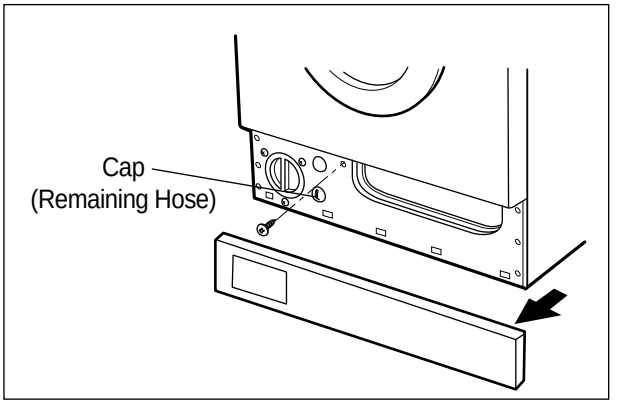
¡ First, prepare a bucket to put in the remained water.

GASKET ASSEMBLY



¤ The cabinet gasket clamp is released.

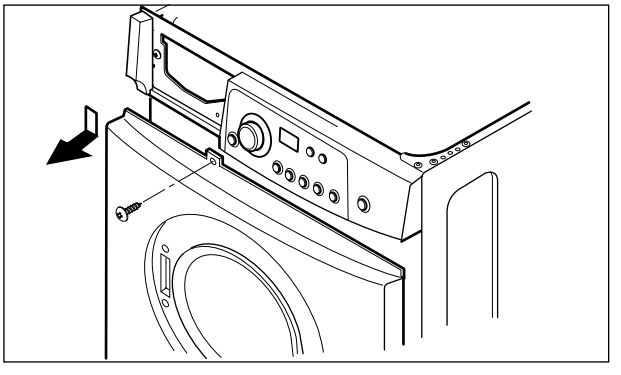
¤Ł Two screws are unscrewed from the cabinet cover.



¤ One screw is unscrewed from the lower cover.

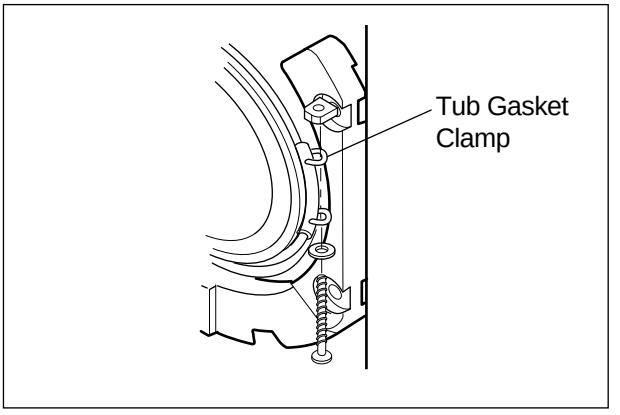
¤Ł The lower cover is disassembled by pulling out.

¤Ø Three screws are unscrewed from the cabinet.

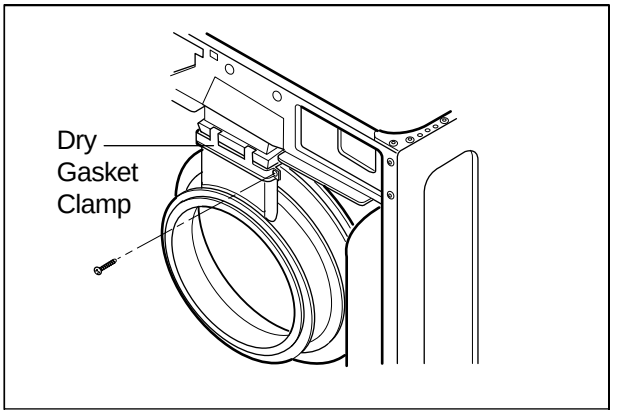


¤ The control panel is removed.

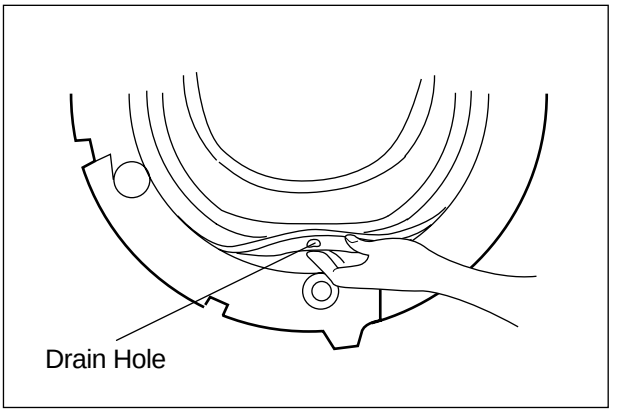
¤Ł Screw is unscrewed from the cabinet cover.



¤ Remove tub gasket clamp by loosening the screw.

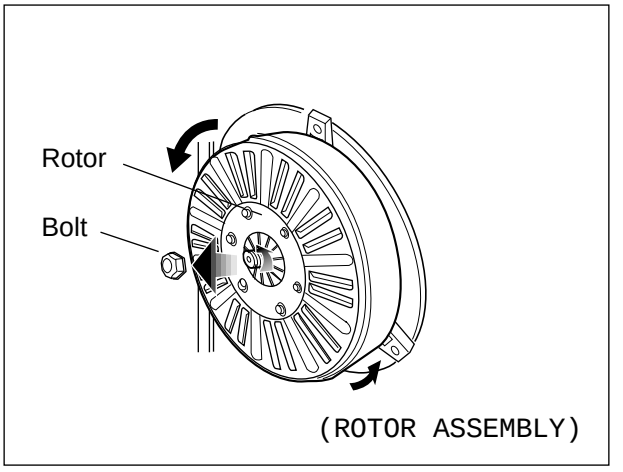


¤ Remove dry gasket clamp by loosening the screw.



¤ When reassembling the gasket, put the drain hole of the gasket downward, then assemble.

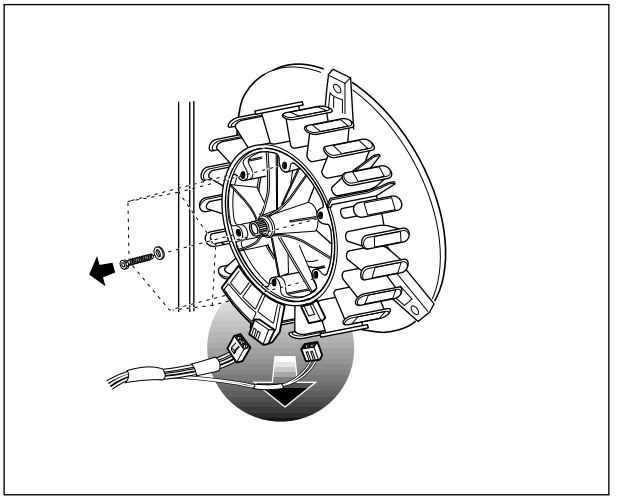
ROTOR ASSEMBLY, STATOR ASSEMBLY, FRICTION DAMPER



(ROTOR ASSEMBLY)

¤ Remove the back cover.

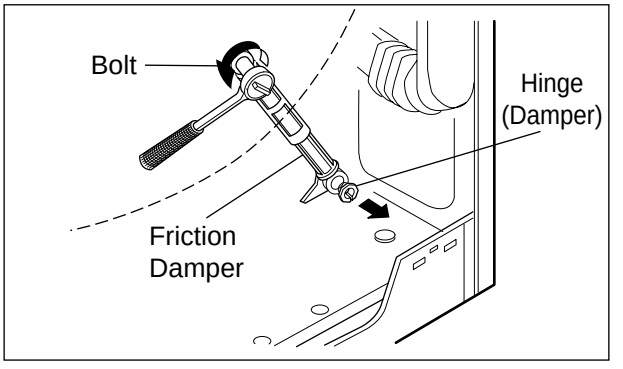
¤Ł After loosening the bolt, Rotor, pull out the rotor.



(STATOR ASSEMBLY)

¤ Remove the 6 bolt from the stator.

¤Ł Disconnect the 2 connectors.



(FRICTION DAMPER)

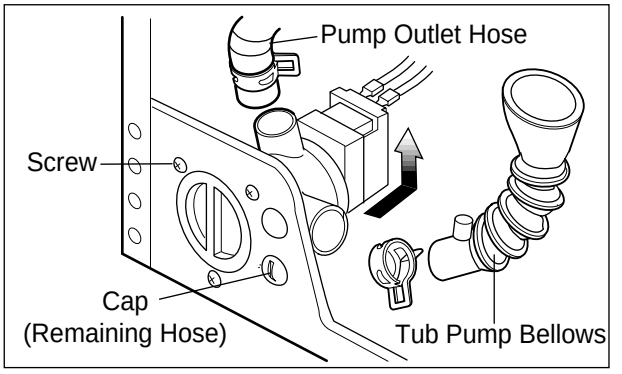
¤ Remove the bolts at the Tub.

¤Ł The Hinge(Damper) at the base is pulled off pressing on the snaps at the sharp end.

¤Ø The hinge at the base is pulled off.

(To arrow direction)

PUMP



¤ Remove pump outlet hose.

¤Ł Remove tub pump bellows.

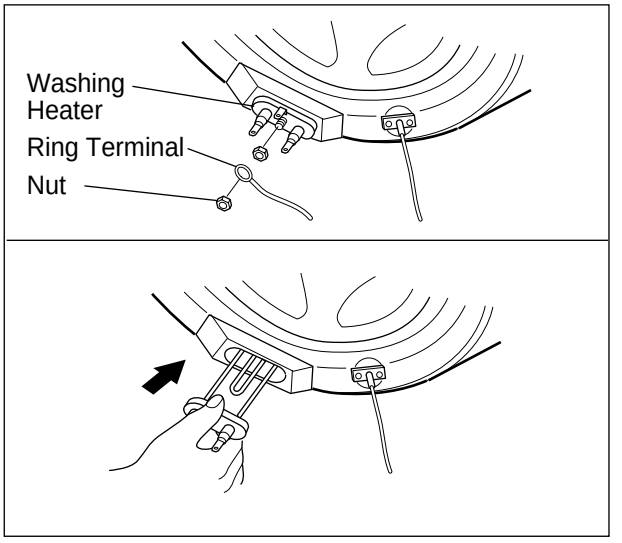
¤Ø Remove cap(Remaining Hose).

¤Œ Disconnect the wiring.

¤º Three screws are unscrewed from the cabinet.

¤ Remove the pump to arrow direction.

HEATER



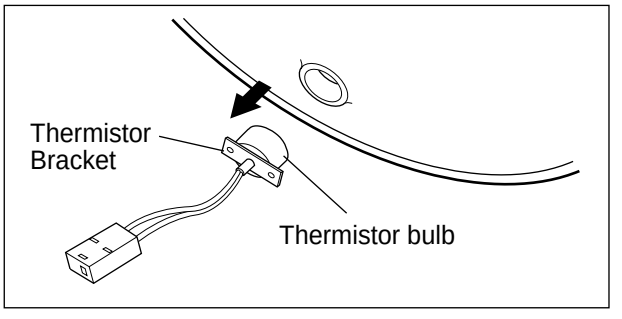
¤ Loosen the nut.

¤Ł Remove washing heater by pulling out.

CAUTION

When assembling the washing heater, insert the heater to heater clip on the bottom of tub.

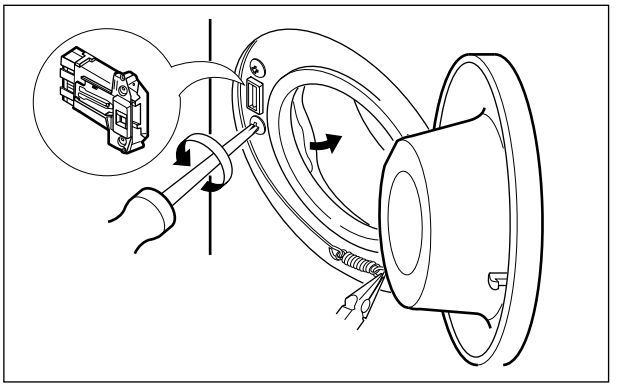
THERMISTOR



¤ Pull it out by holding the thermistor bracket.

ƒT If holding the wire and pulling out it, it may be broken.

SWITCH ASSY, DOOR LOCK

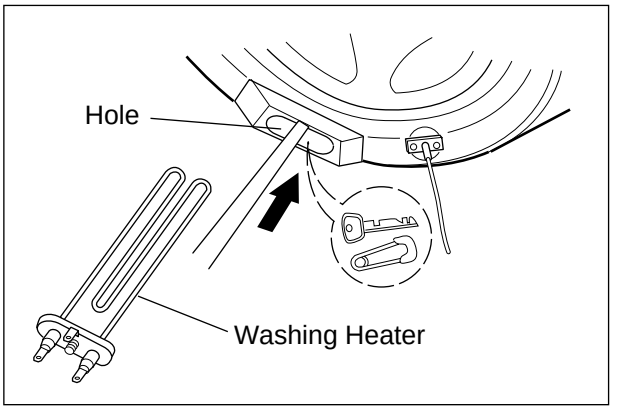


¤ The cabinet cover clamp is removed and the gasket is released.

¤Ł Two screws are unscrewed.

¤Ø The door lock S/W is disconnected form the wiring connector and the strap.

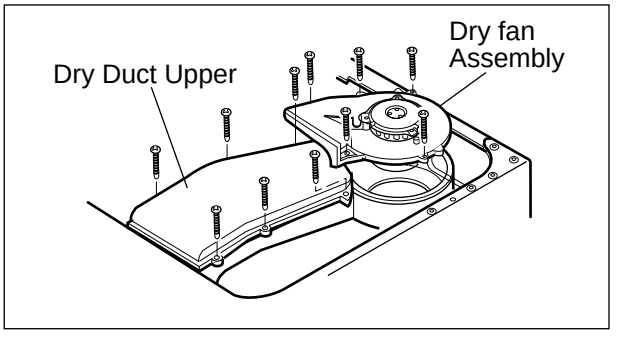
WHEN FOREIGN OBJECT STUCK BETWEEN DRUM AND TUB



¤ Remove washing heater.

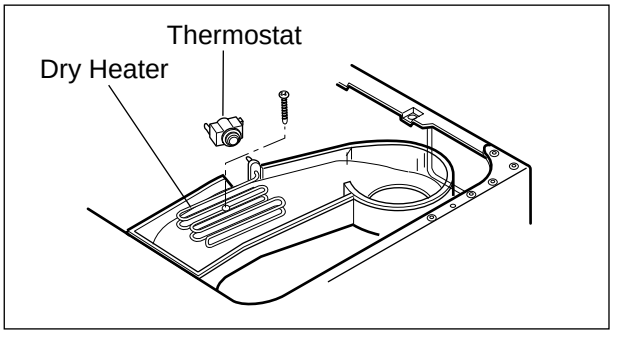
¤Ł Remove the foreign object(wire,coin,etc) by inserting long bar in the hole.

DRY DUCT



¤ Remove 5 screws and dry fan assembly.

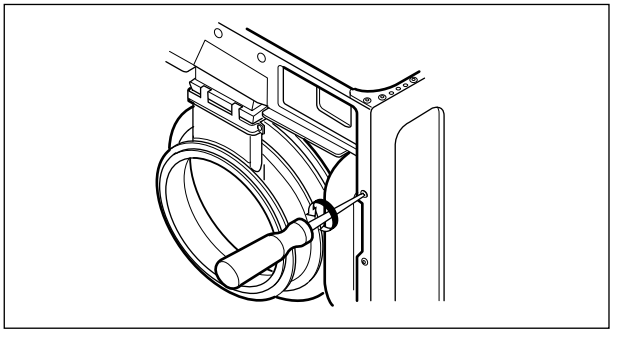
¤Ł Remove 6 screws and dry duct upper.



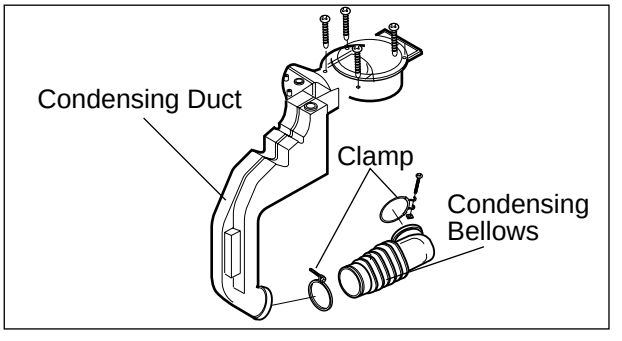
¤ Remove 1 screw and dry heater.

¤Ł Remove thermostat.

CONDENSING DUCT



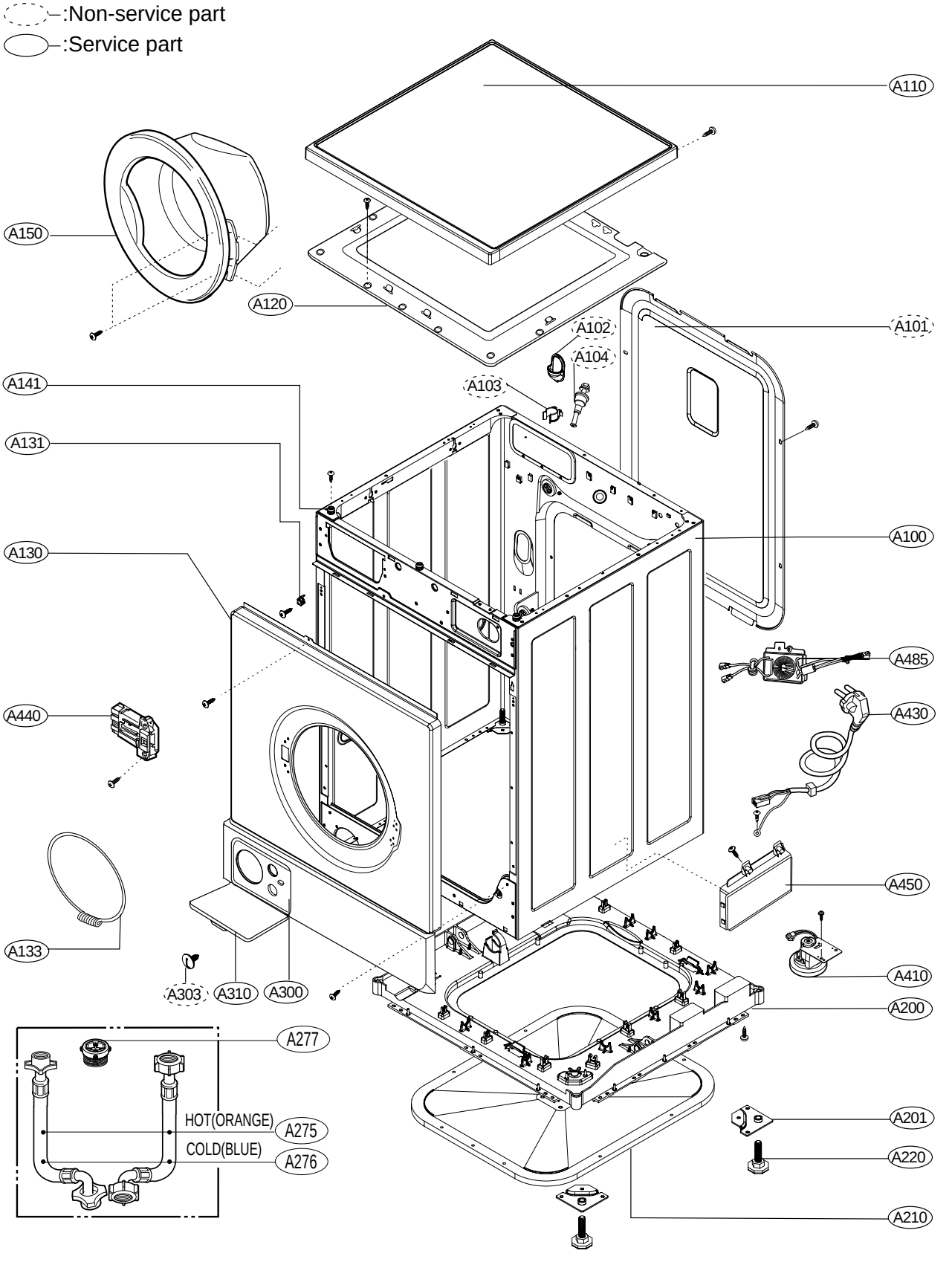
¤ Remove 2 screws from cabinet.



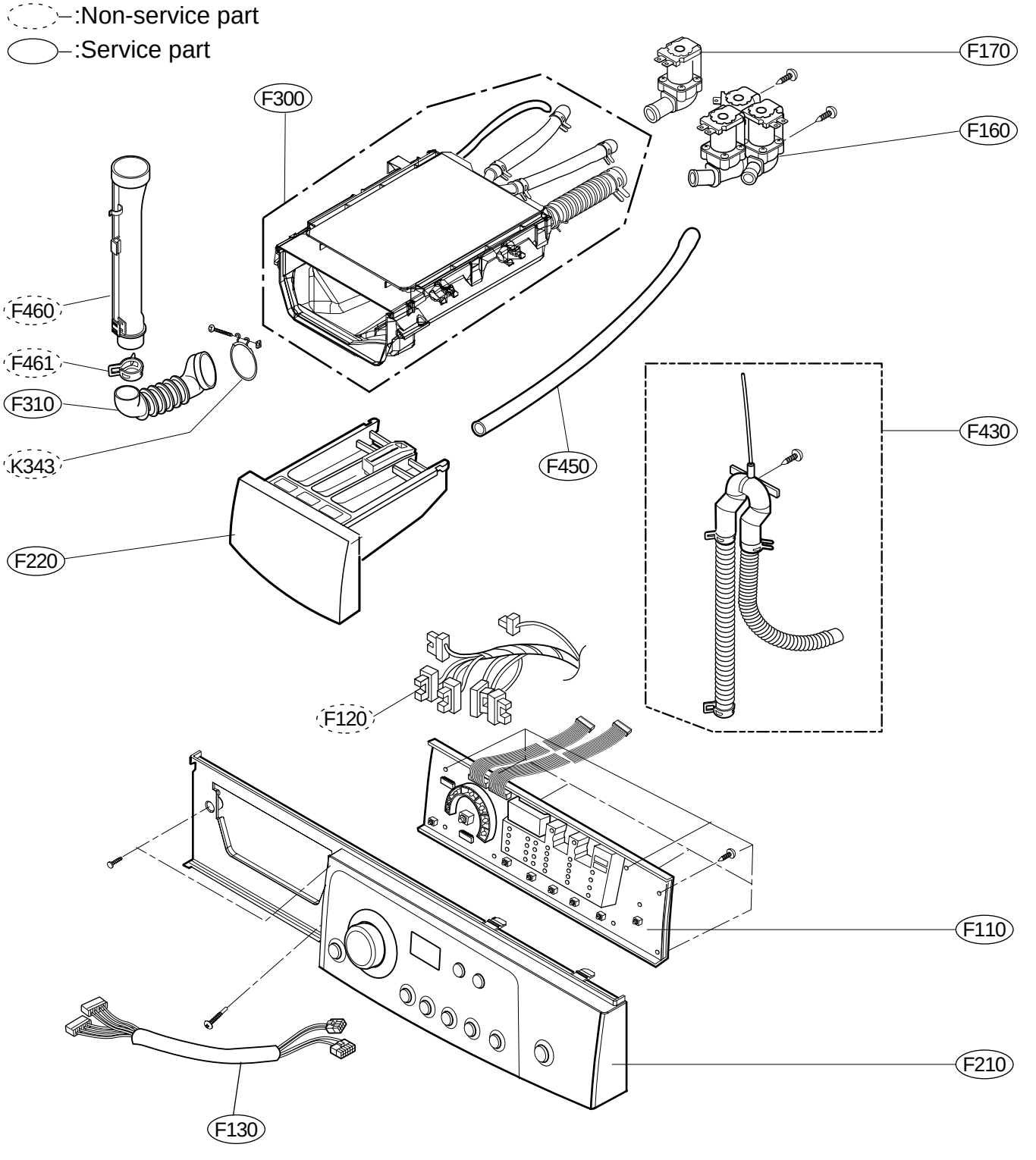
¤ Remove clamp and condensing duct.

10. EXPLODED VIEW AND PART LIST

10-1.THE PART LIST OF CABINET ASSEMBLY



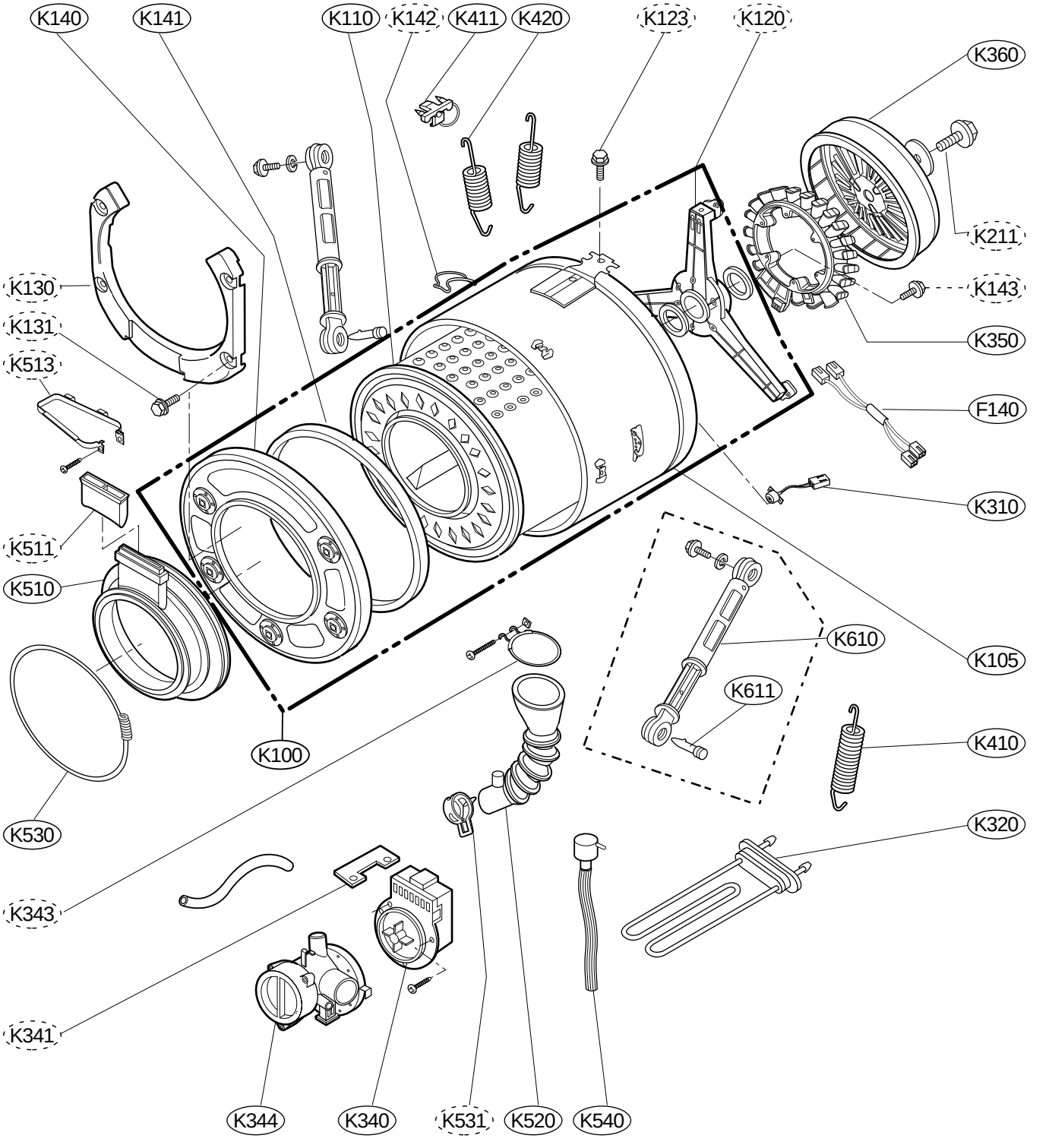
10-2 THE EXPLODED VIEW OF CONTROL PANEL & DISPENSER ASSEMBLY



10-3 THE EXPLODED VIEW OF DRUM & TUB ASSEMBLY

:Non-service part

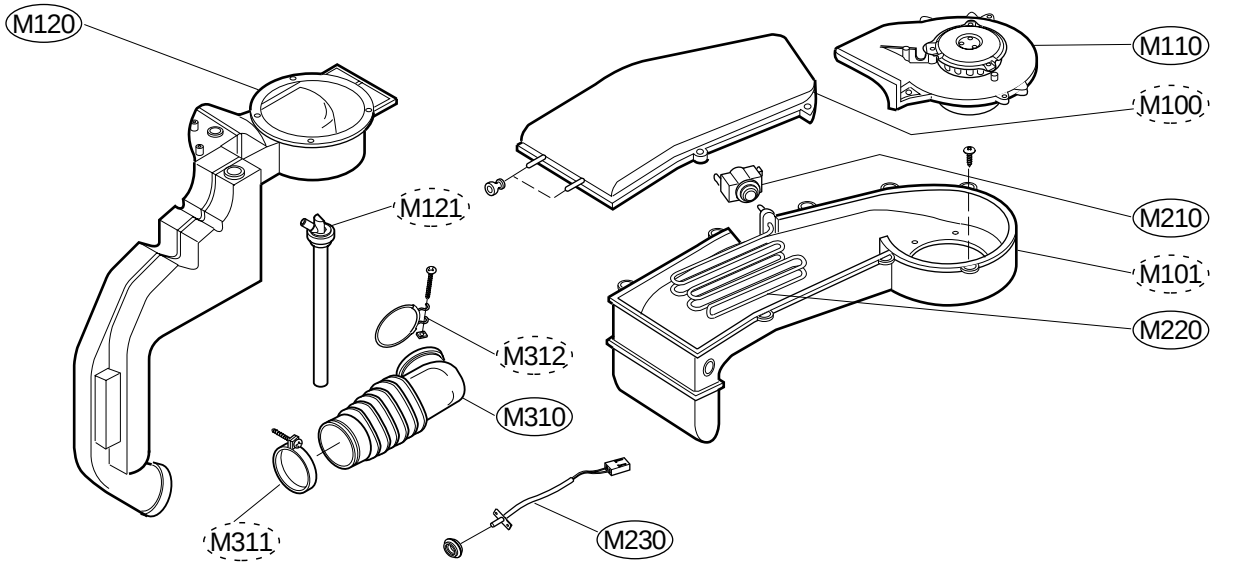
:Service part



10-4 THE EXPLODED VIEW OF DRYER

:Non-service part

:Service part



JUN. 2002 PRINTED IN KOREA P/No.:3828ER3008T